

REMARKS

Entry of this Amendment and reconsideration are respectfully requested in view of the amendments made to the claims and the remarks made herein.

Claims 1-7 are pending. Claims 1 and 3-6 stand rejected. Claims 2 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form. Claim 4 has been amended. No new matter has been added.

Claims 1 and 3-6 stand rejected under 35 USC 103(a) as being unpatentable over Casavant (USP no. 5,491,516). The Office Action states that these claims are rejected for the same reasons as stated in the previous Office Action (dated 5/20/2004). More specifically, the Office Action states that "Casavant '516 teaches the claimed 'method for encoding video signals ... adjusting the delay when a change from an F1 dominance to an F2 dominance is detected ... and when a change from an F2 dominance to an F1 is detected, the last field of the last F2 dominant frame is repeated. ... Casavant fails to explicitly teach 'delay being decreased by a quantity equal to 'one field' and also delay being increased by a quantity equal to 'one field' duration, however, it would have been obvious ... that removal/elimination of redundant field would decrease the delay and repeating the fields would increase the delay equal to the amount removed/added."

Applicant respectfully disagrees with, and explicitly traverses the examiner's reasons for rejecting the claims. A claimed invention is prima facie obvious when three basic criteria are met. First, there must be some suggestion or motivation, either in the reference themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the teachings therein. Second, there must be a reasonable expectation of success. And, third, the prior art reference or combined references must teach or suggest **all** the claim limitations.

With regard to claim 1, this claim recites

1. A method for encoding video signals corresponding to a sequence of frames each of which originally consists of two fields F1 and F2, in which the encoding step is preceded by a preprocessing step which itself comprises the sub-steps of :

- (A) receiving the successive frames and delaying each of them with a delay of at least two fields;
- (B) adjusting said delay according to the following dominance change criterion:
 - (a) when a change from an F1 dominance to an F2 dominance is detected, the first field of the first F2 dominant frame is suppressed, said delay being therefore decreased by a quantity equal to "one field" duration;
 - (b) when a change from an F2 dominance to an F1 dominance is detected, the last field of the last F2 dominant frame is repeated, the delay being therefore increased by a quantity equal to "one field" duration.

Casavant teaches an apparatus for field elimination for video compression/decompression. The system includes a memory for storing two fields of image data and providing fields of image data separated by one frame interval. Image data from corresponding fields of successive frames are subtracted to generate field differences. The differences are accumulated and if the accumulated difference is less than a predetermined value the most recent field is removed or excised. The removed field may then cause a disruption in the order of the fields within each frame. In one case, when no fields are removed, the frame transmitted may be in the order of a, nominal, first/second (odd/even) fields. In a second case, when a field is considered redundant and dropped, the frame transmitted may be of the order second/first field. Casavant further teaches the use of a DF bit that is set to one when the odd and even fields are reverse in time order (see col. 6, lines 4-6). When the even and odd fields are in normal order than the DF flag is set to a logic zero value (see col. 6, lines 14-16). The DF flag is provided to the receiver to enable the receiver to determine the field order and reconstruct the video signal. The decoder provides the nominally odd/even frame directly to an output device as no redundancy is indicated ("When no field redundancy is indicated, data is coupled directly from the memory to the output device." see col. 6, lines 65-67). However, when the DF flag indicates an even/odd field order, then the decoder uses information stored from a previous frame to display the information in the proper field sequence, (see col. 7, lines 14-19).

Hence, Casavant teaches a system for removing or excising fields from the data stream when the data is considered redundant and providing an indicator to enable a receiver (decoder) to reconstruct the original signal. However, Casvant fails to teach or suggest material elements claimed in the present invention. More specifically, Casvant

fails to disclose decreasing a delay when an F1 dominance (odd) to an F2 dominance (even) is detected, or increasing a delay when an F2 dominance to an F1 dominance is detected.

The Office Action states that “it would have been obvious to one skilled in the art that, removal/elimination of redundant field, would decrease the delay and repeating fields would increase the delay equal to the amount removed/added.” However, even if it could be said that removal of fields is comparable to decreasing the delay and adding fields is comparable to increasing the delay, Casavant certainly fails to disclose any increase in the delay as Casavant only teaches removal of fields from the bit stream during the encoding phase. Hence, any increase that may be considered in the delay is contrary to the teachings of Casavant. Hence, Casavant would not, by itself, render obvious the present invention.

Further, the delay value disclosed is that value that the input bit stream is offset by to enable a comparison between the original bit-stream and its offset version. Casavant fails to teach any process that would alter this value as the removal of redundant fields from the output bit stream has no effect on the offset between the bit-streams.

Applicant submits, that in this case, no reason has been shown, either explicitly or implicitly, in the Casavant reference that would render the invention obvious. Rather the Office Action merely states that “it would have been obvious ... that removal/elimination of redundant fields would decrease the delay and repeating the fields would increase the delay equal to the amount removed/added.” However, nowhere in the Casavant reference does the transmitter or encoder repeat or add fields. In fact, repeating fields in the bit stream would be an element that is contrary to the teachings of Casavant, as Casavant teaches removing redundant fields from the bit stream and having the receiver restore and insert the missing fields.

Applicant, accordingly, believes that the rejection of the claims is based on the impermissible incorporation of elements that are taught in the instant applicant and not disclosed in the cited reference.

Applicant submits that the rejection has been overcome and can no longer stand. Applicant respectfully requests withdrawal of the rejection and allowance of the claims.

With regard to independent claims 3 and 5, these claims recite subject matter similar to that disclosed in claim 1 and have been rejected for the same reason cited in rejecting claim 1. Accordingly, the applicant's remarks made in response to the rejection of claim 1 are also applicable in response to the rejection of claims 3 and 5. In view of remarks made with regard to the rejection of claim 1, which are reasserted, as if in full, in response to the rejection of claims 3 and 5, applicant submits that the reason for rejecting claims 3 and 5 have been overcome and can no longer be sustained. Applicant respectfully requests withdrawal of the rejection and allowance of the claim.

With regard to claims 2, 4, 6 and 7, these claims ultimately depend from claims 1, 3 and 5, respectively, which have been shown to be allowable over the reference cited. Accordingly, claims 2, 4, 6 and 7 are also allowable by virtue of their dependency upon an allowable base claim.

With regard to claims 2 and 7, these claims have been indicated to be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims.

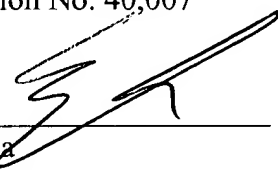
Applicant, through his attorney, wishes to thank the examiner for his indication of allowable subject matter in claims 2 and 7. However, in view of the remarks made herein, applicant believes that the claims are in a condition for allowance and elects, at this time, not to amend claims 2 and 7 as stated in the Office Action. Applicant, however, reserves the right to amend the claims at a subsequent time.

Although the last Office Action was made final, this amendment and the amendments to the claims should be entered. Claim 4 has been amended only to correct a typographical error. Since no matter has been added to the claims that would require comparison with the prior art or any further review only a cursory review is required by the examiner. The amendment therefore should be entered without requiring a showing under 37 CFR 1.116(b).

For all the foregoing reasons, it is respectfully submitted that all the present claims are patentable in view of the cited references. A Notice of Allowance is respectfully requested.

Respectfully submitted,
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Date: February 24, 2005

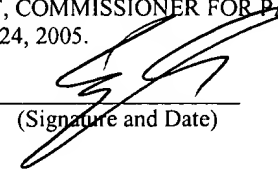
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